Huawei FusionServer

2-Socket Rack Server V5

HUAWEI TECHNOLOGIES CO., LTD.

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Huawei FusionServer

1288H V5 Server

1288H V5(4-drive)

1288H V5(8-drive)

1288H V5(10-drive)[1]

- Latest Intel® Xeon® Scalable Processors, supporting up to 28 cores
- Supports a maximum of 24 DDR4 DIMMs, providing up to 3 TB memory
- Supports configuration of 4 x 3.5-inch or 8/10 x 2.5-inch hard drives and 4/8 x NVMe SSDs
- Supports DEMT and FDM technologies

[1] Planned for release in December 2017.

Feature Highlights

First-Rate Performance and Ultra-High Density

- Runs on the latest-generation Intel® Xeon® Scalable Processors, with an UltraPath Interconnect (UPI) bus speed of up to 10.4 GT/s between processors. Each processor supports up to 28 computing cores.
- Supports Intel® Turbo Boost, hyper-threading, and Advanced Vector Extensions (AVX 2.0), delivering enhanced computing performance for computing-intensive applications.
- Provides 24 DDR4 memory slots, and delivers memory speeds of up to 2,666 MT/s and memory capacities of up to 3 TB (with 128 GB DIMMs). This is ideal for application scenarios that require large-capacity memory.
- Supports 4 x 3.5-inch or 8 x 2.5-inch (configurable with 4 NVMe SSDs), or 10 x 2.5-inch (configurable with 8 NVMe SSDs) local hard drives.

Higher Energy Efficiency with Smart Power-Saving Technologies

- Employs innovative Dynamic Energy Management Technology (DEMT) to support smart energy conservation, and drives down power consumption by leveraging different technologies. These include component hibernation, automatic power-on/-off for multi-phase power supplies, speed tuning using the proportional-integral-derivative (PID) algorithm, and active-standby power supplies.
- Fitted with 80 Plus® Titanium power supply units (PSUs), has a conversion efficiency of up to 96%, and complies with ENERGY STAR.
- Supports 550 W, 900 W, 1,200 W, and 1,500 W PSU options, adapting flexibly to different power requirements. The 1,200 W and 1,500 W PSUs use DC and high-voltage DC (HVDC) technologies, leading to an improved utilization of energy.
  Note: The Titanium PSU and 1,200 W and 1,500 W PSUs are planned to be released in 2018.

Easy Management & Openness and Integration

- Intelligent O&M with full-lifecycle management, significantly improving deployment and O&M efficiency.
  - » Batch installation of OSs, slashing the average time taken by each server to minutes.
  - » Automated firmware upgrade, with flexible and configurable upgrade policies for different components and drivers.
  - » Stateless computing, allowing for the rapid replication of live-network configurations and swift failover.
  - » Fault Diagnosis and Management (FDM) for in-depth fault diagnosis, with accuracy of up to 93% when diagnosing faults in core components.
- Addresses service requirements for high network I/O by using LOM NICs, with simplified configuration.
- Integrates fault diagnosis LEDs on the front panel to display error codes in real time, allowing maintenance personnel to locate faults as quickly as possible.
- Provides standardized open interfaces and development guides, facilitating seamless integration with third-party management software.

High Computing Density, Smart Power Saving, and Ease of Use

Technical Specifications

	1288H V5
Form factor	1U rack server
Processors	1 or 2 full-series Intel® Xeon® Scalable Processors of up to 205 W
Chipset	Lewisburg-2
Memory	24 DDR4 DIMM slots, up to 2,666 MT/s RDIMMs support up to 1.5 TB, and LRDIMMs up to 3 TB
Internal storage	Three types of hard drive configurations are supported: • 10 x 2.5-inch hard drives (6–8 NVMe SSDs and 2–4 SAS/SATA drives, with a total number of 10 or less): 0–6 x NVMe SSDs + 0–4 x SAS/SATA drives or 0–7 x NVMe SSDs + 0–3 x SAS/SATA drives or 0–8 x NVMe SSDs + 0–2 x SAS/SATA drives • 8 x 2.5-inch SAS/SATA drives or SSDs (or 4 NVMe SSDs) • 4 x 3.5-inch SAS/SATA drives or SSDs Flash storage: • Two M.2 SSDs
RAID support	• RAID 0, 1, 10, 5, 50, 6, or 60 • (Optional) Configured with a supercapacitor for power-off protection for the cache • RAID state transition, RAID configuration memory, self-diagnosis, and web-based remote configuration
Network ports	LOM NIC: 2 x 10GE and 2 GE ports FlexibleLOM: 2 or 4 GE, 2 x 10GE, or 1 or 2 x 56 Gbit/s Fourteen Data Rate (FDR) InfiniBand (IB) ports
PCIe expansion	Up to 5 peripheral component interconnect express (PCIe) slots: • Two x16 slots for two half-height half-length PCIe 3.0 x16 standard cards • One x8 slot for a full-height half-length PCIe 3.0 x16 standard card • One expansion slot for a RAID controller card • One expansion slot for a FlexibleLOM card
Fan modules	7 hot-swappable counter-rotating fan modules with optional N+1 redundancy
Power supply units	2 hot-swappable PSUs with optional 1+1 redundancy. Supported options include: • 550 W AC Platinum PSUs • 900 W AC Platinum/Titanium PSUs • 1,500 W AC Titanium PSUs • 1,500 W 380 V HVDC PSUs • 1,200 W -48 V to -60 V DC PSUs
Management	• Uses on-board iBMC management module • Supports IPMI, SOL, KVM over IP, and virtual media • Provides one 1 Gbit/s RJ45 management network port (NCSI supported)
Operating systems	• Microsoft Windows Server • Red Hat Enterprise Linux • SUSE Linux Enterprise Server • CentOS • Citrix XenServer • VMware ESXi
Security	• Power-on password • Administrator password • Trusted Platform Module (TPM) • Front bezel
Power supply	• 110 V/220 V AC • 240 V/380 V DC • -48 V DC
Operating temperature	5°C to 45°C (41°F to 113°F), and ASHRAE A3 and A4 compliant
Certification	CE, UL, FCC, CCC, and RoHS
Installation suite	Guide rails and adjustable holding rails
Dimensions (H x W x D)	Chassis with 3.5-inch hard drives: 43 mm x 436 mm x 748 mm (1.70 in. x 17.17 in. x 29.45 in.) Chassis with 2.5-inch hard drives: 43 mm x 436 mm x 708 mm (1.70 in. x 17.17 in. x 27.87 in.)

*Last updated on August 23, 2017

Huawei FusionServer

2288H V5 Server

2288H V5(8-drive)

2288H V5(12-drive)

2288H V5(25-drive)

- Latest Intel® Xeon® Scalable Processors, supporting up to 28 cores
- Supports a maximum of 24 DDR4 DIMMs, providing up to 3 TB memory
- Supports up to 20 x 3.5-inch[1] or 31 x 2.5-inch local hard disks (configurable with 4/8/12/24/28 NVMe SSDs; the 8-NVMe model supports hard RAID[2])
- Provides ten PCIe 3.0 card slots
- Supports DEMT and FDM technologies

[1] Planned for release in September 2017.

[2] Planned for release in December 2017.

Feature Highlights

Balanced Configurations, Ultra-large Storage

- Runs on the latest-generation Intel® Xeon® Scalable Processors, with an UltraPath Interconnect (UPI) bus speed of up to 10.4 GT/s between processors. Each processor supports up to 28 computing cores.
- Supports Intel® Turbo Boost, hyper-threading, and Advanced Vector Extensions (AVX 2.0), delivering enhanced computing performance for computing-intensive applications.
- Provides 24 DDR4 memory slots, and delivers memory speeds of up to 2,666 MT/s and memory capacities of up to 3 TB (with 128 GB DIMMs). This is ideal for application scenarios that require large-capacity memory.
- Supports up to 20 x 3.5-inch or 31 x 2.5-inch local hard drives (configurable with 4/8/12/24/28 NVMe SSDs; the 8-NVMe model supports RAID), delivering high speeds without compromising stability.

Higher Energy Efficiency with Smart Power-Saving Technologies

- Employs innovative Dynamic Energy Management Technology (DEMT) to support smart energy conservation, and drives down power consumption by leveraging different technologies. These include component hibernation, automatic power-on/-off for multi-phase power supplies, speed tuning using the proportional-integral-derivative (PID) algorithm, and active-standby power supplies.
- itted with 80 Plus® Titanium power supply units (PSUs), has a conversion efficiency of up to 96%, and complies with ENERGY STAR.
- Supports 550 W, 900 W, 1,200 W, and 1,500 W PSU options, adapting flexibly to different power requirements. The 1,200 W and 1,500 W PSUs use DC and high-voltage DC (HVDC) technologies, leading to an improved utilization of energy.

  Note: The Titanium PSU and 1,200 W and 1,500 W PSUs are planned to be released in 2018.

Easy Management & Openness and Integration

- Intelligent O&M with full-lifecycle management, significantly improving deployment and O&M efficiency.
  - » Batch installation of OSs, slashing the average time taken by each server to minutes.
  - » Automated firmware upgrade, with flexible and configurable upgrade policies for different components and drivers.
  - » Stateless computing, allowing for the rapid replication of live-network configurations and swift failover.
  - » Fault Diagnosis and Management (FDM) for in-depth fault diagnosis, with accuracy of up to 93% when diagnosing faults in core components.
- Addresses service requirements for high network I/O by using LOM NICs, with simplified configuration.
- Comes with a touchscreen LCD panel for fault diagnosis, allowing O&M personnel to manage the devices more efficiently.
- Provides standardized open interfaces and development guides, facilitating seamless integration with third-party management software.

Deliver High Storage Density and Perfectly Balanced Configurations to Flexibly Meet the Demands of Various Workloads

Technical Specifications

	2288H V5
Form factor	2U rack server
Processors	1 or 2 full-series Intel® Xeon® Scalable Processors of up to 205 W
Chipset	Lewisburg-2
Memory	24 DDR4 DIMM slots, up to 2,666 MT/s RDIMMs support up to 1.5 TB, and LRDIMMs up to 3 TB
Internal storage	Hard drive configurations supported include: • 8 x 2.5-inch SAS/SATA drives or SSDs • 12/16/20 x 3.5-inch SAS/SATA drives • 4/8/12/24/28 NVMe SSDs • 31 x 2.5-inch SAS/SATA drives or SSDs Flash storage: • Two M.2 SSDs
RAID support	• RAID 0, 1, 10, 1E, 5, 50, 6, or 60 • (Optional) Configured with a supercapacitor for power-off protection for the cache • RAID state transition, RAID configuration memory, self-diagnosis, and web-based remote configuration
Network ports	FlexibleLOM: 2 or 4 GE, 2 x 10GE, or 1 or 2 x 56 Gbit/s Fourteen Data Rate (FDR) InfiniBand (IB) interfaces
PCIe expansion	Up to 10 peripheral component interconnect express (PCIe) slots: • Four x8 slots for four full-height full-length PCIe 3.0 x16 standard cards • Three x8 slots for three full-height half-length PCIe 3.0 x16 standard cards • One x8 slot for a full-height half-length PCIe 3.0 x8 standard card • One expansion slot for a RAID controller card • One expansion slot for a FlexibleLOM card
Fan modules	4 hot-swappable counter-rotating fan modules with optional N+1 redundancy
Power supply units	2 hot-swappable PSUs with optional 1+1 redundancy. Supported options include: • 550 W AC Platinum PSUs • 900 W AC Platinum/Titanium PSUs • 1,500 W AC Titanium PSUs • 1,500 W 380 V HVDC PSUs • 1,200 W -48 V to -60 V DC PSUs
Management	• Uses on-board iBMC management module • Supports IPMI, SOL, KVM over IP, and virtual media • Provides one 1 Gbit/s RJ45 management network port (NCSI supported)
Operating systems	• Microsoft Windows Server • Red Hat Enterprise Linux • SUSE Linux Enterprise Server • CentOS • Citrix XenServer • VMware ESXi
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Operating temperature	5°C to 45°C (41°F to 113°F), and ASHRAE A3 and A4 compliant
Certification	CE, UL, FCC, CCC, and RoHS
Installation suite	Guide rails and adjustable holding rails
Dimensions (H x W x D)	Chassis with 3.5-inch hard drives: 86.1 mm x 436 mm x 748 mm (3.40 in. x 17.17 in. x 29.45 in.) Chassis with 2.5-inch hard drives: 86.1 mm x 436 mm x 708 mm (3.40 in. x 17.17 in. x 27.87 in.)

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For more information

To learn more about Huawei's Servers, contact Huawei sales representatives or business partners, or visit:

http://e.huawei.com/cn/products/cloud-computing-dc/servers

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Why Huawei servers?

Huawei is a world-leading server provider with a broad spectrum of server offerings including rack, high-density, blade servers and KunLun Mission Critical Servers. Huawei is the industry's only vendor that has the integrated capabilities of server R&D, manufacture, and delivery. Huawei servers have been recognized for their superior quality, rock-solid reliability, extraordinary performance, ease of management, energy efficiency, and security. Huawei servers have served over 5,000 customer accounts across various industries around the globe, including government, finance, electric power, Internet, telecom, energy, transportation, and education.